UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,767	06/20/2005	Joseph Colineau	4590-427	2013

33308 7590 07/12/2007

LOWE HAUPTMAN & BERNER, LLP
1700 DIAGONAL ROAD, SUITE 300
ALEXANDRIA, VA 22314

EXAMINER	
TON, TRI T	

ART UNIT	PAPER NUMBER
2877	

MAIL DATE	DELIVERY MODE
07/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,767	COLINEAU ET AL.	
	Examiner	Art Unit	
	Tri T. Ton	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is a response to the amendment and remarks/arguments filed on 04/19/2007.

Specification

2. The examiner respectfully suggests that the Applicant carefully review the specification for idiomatic and grammatical errors, which may have been inadvertently overlooked.

There are minor typographical errors throughout. For example, on Claim 4, line 2 "consists in" should be "consists of".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 19 and 20 are rejected under 35 U.S.C. 102(e) as being teached by Markantes et al (U.S. Patent No. 6,970,236). Hereafter, "Markantes".

As to claim 19, Markantes teaches an optical recording device with laser source (column 7, lines 37-39), a storage device (column 9, lines 25-33) and an optical reading device with laser

source, whose illumination beam illuminates the objects and whose optical device forms on the detector of the reading device an image of the illuminated area of these objects (column 7, lines 60-67) and (column 8, lines 1-4), parameters of these optical devices being modifiable (column 13, lines 13-48) and (column 14, lines 36-52).

As to claim 20, Markantes teaches the modifiable parameters are one at least one of the following parameters: wavelength of the laser source, direction of emission of the laser beam, focusing of the laser beam, position of the laser source, inclination and position of the object with respect to the laser beam (column 13, lines 13-48) and (column 14, lines 36-52).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-3, 10-14, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard (U.S. Patent No. 4,191,476)) in view of Markantes et al (U.S. Patent No. 6,970,236). Hereafter, "Pollard" and "Markantes".

Regarding Claim 1, Pollard teaches illuminating with coherent light a volume-wise (abstract, line 6), (column 1, line 60) at least partially scattering surface of reference objects under precise illumination conditions (abstract, lines 7-9), (column 1, lines 52-54), (column 2,

lines 22-30), recording the speckle patterns thus obtained for various nominal values of illumination parameters and also in a range of values around these nominal values (column 8, lines 6-18, 60-63), then, upon the verification of other objects or of the same objects, in illuminating these objects under the same nominal conditions (column 9, lines 30-68), (column 10, lines 1-2).

However, Pollard does not teach comparing the speckle pattern and retaining the objects if their speckle pattern corresponds to one of those that was recorded. Markantes teaches comparing the data and retaining the objects if all conditions are met (column 15, lines 19-26). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Pollard by having comparing the data and retaining the object in order to "identify the object as being authentic".

Regarding Claim 2, Pollard teaches the parameters being one at least of the following parameters: wavelength of illumination of the objects, distance of focusing on the reference object, position of the illumination source, orientation of the objects (column 5, lines 15-28).

Regarding Claim 3, Pollard teaches the speckle patterns being preprocessed before-recording (column 4, lines 45-54).

Regarding Claims 10, and 12, and Markantes teach all the limitations of claim 1 as stated above except for a database of reference patterns being constructed, the authentication or identification being performed using this database, and the authentication or identification being

borne out by interrogating a reader. Markantes also teaches a database of reference patterns being constructed and the authentication or identification being performed using this database (column 8, lines 47-61), and the authentication or identification being borne out by interrogating a reader (Figure 8), (column 15, lines 19-67), (column 16, lines 1-21). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Pollard by having a database of reference patterns and the authentication or identification being performed using this database in order to "be capable to compare the measured data with reference data stored in the database" efficiently.

Regarding Claim 11, Pollard teaches a calibration of the readers being performed with the aid of a calibration image so as to determine the critical parameters (column 2, lines 40-59).

Regarding Claim 13, Pollard teaches the recording of the speckle patterns is done by holography (column 2, lines 40-45).

Regarding Claim 14, Pollard teaches the characteristics of the optical part of the reader being adjustable and the positioning error, if any, of the object being corrected while tending to reduce measurement error (column 2, lines 30-39).

Regarding Claim 16, Pollard teaches information identifying the object of another nature being recorded in addition to the speckle images (column 5, lines 39-46).

Regarding Claim 17, Pollard teaches the identification information being contained on the surface or in the interior of the object (column 5, lines 48-60).

Regarding Claim 18, Pollard and Markantes teach all the limitations of claims 1, 16, 17 as stated above except for the identification information being borne by at least one of the following supports: magnetic track, electronic chip, optical storage area, and bar code. Markantes also teaches the identification information being borne by optical storage area (Figure 5, elements 250, 248). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Pollard by having the identification information being borne by optical storage area in order to analyze, store and retrieve data with data storage area.

7. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard (U.S. Patent No. 4,191,476)) in view of Markantes et al (U.S. Patent No. 6,970,236), and further in view of Butters et al. (U.S. Patent No. 3,816,649). Hereafter, "Pollard", "Markantes", and "Butters".

Regarding Claims 8, and 9, Pollard and Markantes teach all the limitations of claim 1 as stated above except for the comparison being done by correlation, and the decision of a comparison being taken on the basis of criteria weighting at least one of the following results: the logarithm of the deviation between the amplitude of the correlation peak and a predefined threshold, the distance between the current position of the correlation peak and the nominal position, and the variance of these data over several successive measurements. Butters teaches

the comparison being done by correlation (column 7, lines 23-27), and the decision of a comparison being taken on the variance of these data over several successive measurements (column 7, lines 15-41). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Pollard and Markantes by adding the comparison being done by correlation, and the decision of a comparison being taken on the variance of these data over several successive measurements in order to make "a comparison between" data "derived from" the database of the speckle patterns efficiently.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard (U.S. Patent No. 4,191,476)) in view of Markantes et al (U.S. Patent No. 6,970,236), and further in view of Sano et al. (U.S. Patent No. 4,799,175). Hereafter, "Pollard", "Markantes", and "Sano".

Regarding Claim 4, Pollard and Markantes teach all the limitations of claims 1 and 3 as stated above except for compressing the images. Sano teaches compressing the images (column 16, lines 21-56). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Pollard and Markantes by having compressing the images in order to store data into memory efficiently.

9. Claims 5-7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard (U.S. Patent No. 4,191,476) in view of Markantes et al (U.S. Patent No. 6,970,236), further in view of Sano et al. (U.S. Patent No. 4,799,175) and further in view of Kirsch et al (U.S. 5,650,855). Hereafter, "Pollard", "Markantes", "Sano", and "Kirsch".

Regarding Claims 5-7 and 15, Pollard, Markantes and Sano teach all the limitations of claims 1, 3, 4, and 14 as stated above except for image transform, phase information, spatial frequencies, and comparing speckle image. Kirsch teaches Fourier transform, phase information, spatial frequencies, and comparing pattern (column 1, lines 11-55), (Abstract). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Pollard, Markantes and Sano by having image transform, phase information, spatial frequencies and comparing speckle image in order to "determine the difference between test and reference" efficiently.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference Pollard (U.S. Patent No. 4,191,476), Markantes et al (U.S. Patent No. 6,970,236), Butters et al. (U.S. Patent No. 3,816,649), Sano et al. (U.S. Patent No. 4,799,175) and Kirsch et al (U.S. 5,650,855) teach of various features similar to the claimed invention.

Response to Arguments

11. Applicant's arguments, see pages 7-8, filed on 04/19/2007, with respect to the rejection(s) of claim(s) 19-20 under 102(b) have been fully considered but are not persuasive.

12. With respect to applicant's remarks regarding rejected claims 19 and 20, Markantes discloses a system for authenticating objects having "an interference security device or feature", the Examiner asserts that Markantes also discloses all the features of Claims 19 and 20. See the 102(b) rejection above.

13. As to dependent claim 20, the claim should not be withdrawn from this rejection due to the rejection of claim 19.

Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri T. Ton whose telephone number is (571) 272-9064. The examiner can normally be reached on 10:30am - 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 4, 2007
Examiner Tri Ton/SN

LAYLA G. LAUCHMAN
PRIMARY EXAMINER

Art Unit 2877
Technology Center 2800